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EXAMINER
SCHWABRON, R

ART UNIT
1816

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

081416920

Applicant(s)

Miltner et al.

Examiner

Row Schwadron

Group Art Unit

1816

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 8/20/97 and 9/8/97.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-30, 34-51, 53-56, 64, 70 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-30, 34-51, 53-56, 64, 70 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

Office Action Summary

15. Claims 1-30,34-51,53-56,69,70 are under consideration. Claims 31-33,52,57-68 have been cancelled.

RESPONSE TO APPLICANTS' ARGUMENTS

16. The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornam*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 1-13,53-56,69,70 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending application Serial No. 08/441259. Although the conflicting claims are not identical because the scope of claim 1 of 08/441259 differs from that of the instant invention in that it recites that the cells are not lysed as part of the procedure, both sets of claims read on methods that encompass positive selection of cells secreting a particular protein. Therefore, the two sets of claims under consideration in this rejection would have been prima facie obvious in view of each other to one of ordinary skill in the art at the time the invention was made for the aforementioned reasons.

This is a *provisional* obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant has indicated that a terminal disclaimer would be submitted at a later date if the instant application is found allowable.

18. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Regarding applicants comments on page 6 of the instant amendment, there was no "first page of the PCT publication" that was filed as part of the specification of the instant application.

19. Applicants need to update the status of all US patent applications (eg. first page of specification) disclosed in the specification (eg. abandoned).

20. Claims 1-21,29,30,34-40,43-50,53-56,69,70 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the claimed method or kit which uses a high viscosity or gel forming medium such as gelatin or agarose or alginate, does not reasonably provide enablement for the claimed method or kit that does not use said ingredients. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims for the reasons elaborated in the previous Office Action. Applicants arguments have been considered and deemed not persuasive.

Manz et al. teach that, "In normal medium the secreted product will readily diffuse away and, in the approach described here, will label all cells covered with the affinity matrix, whether they are secreting or not." (page 1923, first column). Manz et al. later point out that a solution to this problem is to perform the assay in a high viscosity media (page 1923, first column). Thus, Manz et al. establish the need for high viscosity media to practice the instant invention. Therefore, the enablement is not commensurate with the scope of claims that do not recite the aforementioned ingredient as a component of the claimed method or kit.

Regarding applicants comments on pages 7 and 8 of the instant amendment, Manz et al. (an inventor of the instant application), discloses in a publication filed after the filing date of the instant invention, wherein said publication discloses the instant invention that, "In normal

medium the secreted product will readily diffuse away and, in the approach described here, will label all cells covered with the affinity matrix, whether they are secreting or not.”(page 1923, first column). Manz et al. later point out that a solution to this problem is to perform the assay in a high viscosity media (page 1923, first column). Thus, Manz et al. establish the need for high viscosity media to practice the instant invention. Regarding Example 1 of the specification, said example actually discloses the need to use high viscosity media to actually distinguish secreting from nonsecreting cells (see page 28, last sentence, continued on next page). Example 1 in the specification indicates that depending on the parameters used, in the absence of high viscosity media it is not possible to distinguish secreting from nonsecreting cells (see page 27, last paragraph). Regarding the specification, page 18, Manz et al. teach that, “In normal medium the secreted product will readily diffuse away and, in the approach described here, will label all cells covered with the affinity matrix, whether they are secreting or not.”(page 1923, first column). Manz et al. later point out that a solution to this problem is to perform the assay in a high viscosity media (page 1923, first column). Thus, Manz et al. establish the need for high viscosity media to practice the instant invention.

21. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

22. Claims 14,15,29,30 stand rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Kohler et al. For the reasons elaborated in the previous Office Action. Applicants arguments have been considered and deemed not persuasive.

Kohler et al. teaches the methods of claims 14 and 15 (see page 469, section 2.8). Kohler et al. teach that the cell bound product (eg. IgM) is labelled with a label moiety (eg. with complement) prior to separation. Regarding applicants comments, Kohler et al. teach the method of claim 14, which is drawn to a method to label cells with a secreted product (see entire document), not a method to positively select cells. Claim 14 does not disclose the use of a “label moiety”. Regarding applicants comments about claim 15, complement functions as a “label

moiety" in the method of claim 15 (identifies a population of cells to be negatively selected by virtue of binding to complement).

Regarding applicants comments on page 12 of the instant amendment, claim 29 reads on progeny of cells which secrete a desired product (eg. hybridoma cells that secrete a desired antibody). The progeny of labelled cells produced by the claimed method will not be labelled because said cells are not the original labelled parent cells and the label or capture moiety would not be found on progeny cells. Therefore, the progeny of the cells of claim 29 are identical to hybridomas secreting a desired product (eg. any hybridoma cell). Kohler et al. teach hybridoma cells. Regarding cells separated by the claimed method, the labelled cells will not maintain the capture moiety/label for an indefinite period of time. All membrane bound molecules are eventually recycled and disappear from the cell surface after an appropriate length of time. After the capture moiety disappears from the cell surface, a hybridoma cell produced by the claimed method would not differ any art known hybridoma cell (eg. that taught by Kohler et al.).

23. Claims 22 and 23 remain rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Weissman et al.

Weissman et al. teach cells capable of capturing a product secreted and released by said cells (IL-2) wherein the capture moiety (IL-2 receptor) is anchored to the surface of said cells through an anchoring moiety (transmembrane domain of IL-2 receptor).

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claims 14- 28,34-51 remain rejected under 35 U.S.C. § 103 as being unpatentable over Kohler et al in view of Hunt, Segal (US Patent 4,676,980) and prior art disclosed in the specification for the reasons elaborated in the previous Office Action. Applicants arguments have been considered and deemed not persuasive.

Regarding applicants comments on pages 16 and 17 of the instant amendment, the

ingredients in the claimed kit would have been used in the method taught by Kohler et al. Segal

teaches bispecific antibodies (see Abstract). Segal teaches that bispecific antibodies can bind a cell surface antigen on the surface of a target cell and also bind another desired antigen, thus bringing the antigen to the cell surface (see columns 1 and 2). In view of such a teaching it would have been obvious to a routineer that TNP or any desired molecule that would have been used in the method taught by Kohler would have been connected to the surface via bispecific antibody. Regarding the label in the claimed kit, complement functions as a label in the method taught by Kohler et al. The recitation of an intended use in the kit claim carries no patentable weight. Regarding claims 14-21, Kohler et al. teaches the methods of claims 14 and 15 (see page 469, section 2.8). The product (eg. IgM) is labelled with a label moiety (eg. with complement) prior to separation. Regarding applicants comments, Kohler et al. teach the method of claim 14, which is drawn to a method to label cells with a secreted product (see entire document). Claim 14 does not disclose the use of a "label moiety". Regarding applicants comments about claim 15, complement functions as a "label moiety" in the method of claim 15 (identifies a population of cells to be negatively selected by virtue of binding to complement). Claims 14-21 are not drawn to a method of selecting or separating cells. Claims 14-21 are drawn to methods of labeling cells and said methods would have been used in the method of Kohler et al. Regarding claims 22-28, it would have been obvious to a routineer that the method of Kohler et al. could have been practiced using labeling of the cell surface with any molecule for which negative selection of IgM producing antibodies was desired as per the method taught by Kohler for negative selection of antiTNP IgM antibodies.

26. Claims 69 and 70 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the specification as originally filed for the methods of claims 69 and 70.

27. Claims 10,26,34,41,42 are rejected under 35 U.S.C. 112, second paragraph, as being

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indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.


Claim 10,26,34 are indefinite in the recitation of "anchor" because it is unclear what this means or encompasses in the context recited in the claim.

28. No claim is allowed.

29. Papers related to this application may be submitted to Group 180 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). Papers should be faxed to Group 180 at (703) 305-3014.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Ron Schwadron whose telephone number is (703) 308-4680. The examiner can normally be reached Tuesday through Friday from 8:30 to 6:00. The examiner can also be reached on alternative Mondays. A message may be left on the examiners voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Christina Chan can be reached on (703) 308-3973. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 180 receptionist whose telephone number is (703) 308-0196.

RONALD B. SCHWADRON
PRIMARY EXAMINER
GROUP 1800



Ron Schwadron, Ph.D.
Primary Examiner
Art Unit 1816
December 8, 1997